Diversity in leadership: race in leader-member exchanges

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Abstract
Purpose – The workforce is becoming increasingly diverse and yet leadership research has lagged behind this trend. In particular, theory links leader-member exchange (LMX) to the development of racially diverse leaders (e.g. Scandura and Lankau, 1996). Yet, there remains a need for empirical evaluation of this premise. The paper aims to discuss these issues.
Design/methodology/approach – In this paper, results of two studies of the effects of leader-member diversity on the LMX dimensions of professional respect, affect, loyalty, and contributions were examined. In the first study, supervisor-subordinate dyads in an applied work setting were examined, while in the second study a laboratory study was used.
Findings – Results in Study 1 indicated that cross-race and minority dyads reported different LMX attributes of professional respect, affect, loyalty and contributions compared with dyads where both members were of the racial majority. In Study 2, racial compositions of dyads was not associated with reported differences in LMX relationships, but was associated with differences in task performance.
Originality/value – This research provides the first systematic examination of the influence of racial diversity on LMX in a leader-follower dyad. As such, this work provides an important reference point in which future research on LMX and diversity can build. Such efforts will help future organizational leaders better navigate the increasingly diverse workplace.
Keywords Leader-member exchange, Relational demography, Task performance, Leader-follower relationships, Racial diversity, Socially situated cognition
Paper type Research paper

Introduction
Leader-member exchange (LMX) research focusses on studying the quality of exchange relationships between a leader and a member of an organization, a leader and a follower, or a supervisor and a subordinate. Although some LMX research has suggested that similarity of leaders and followers relates to higher quality relationships (Turban and Jones, 1988), other studies have found no support for demographic similarity/dissimilarity on LMX (Bauer and Green, 1996; Matkin and Barbuto, 2012; Stark and Poppler, 2009). These inconsistent findings are the catalyst for the current research focussing on racial diversity in LMX dyads. In particular, a conscious attempt was made to systematically examine the influence of racial diversity on LMX in a leader-following follower dyad both in the field (Study 1) and in the laboratory (Study 2).
As such, this paper provides an important reference point in which future research on LMX and diversity can build, with such efforts ultimately helping future organizational leaders better navigate the increasingly diverse workplace.

Prominent theories in the diversity literature suggest that if a leader and member share a similar racial background, they will experience a greater quality of LMX, than would a cross-race dyad (e.g. Bauer and Green, 1996; Liden et al., 1993; Meglino et al., 1989; Roberson and Block, 2001; Tsui and O'Reilly, 1989). While most literature using similarity-attraction theory supports the notion that similar demographic dyads will produce stronger LMX, empirical results have been mixed when considering race (e.g. Bauer and Green, 1996; Goldberg et al., 2008; Matkin and Barbuto, 2012; Stark and Poppler, 2009; Turban and Jones, 1988; Vecchio and Brazil, 2007; Wesolowski and Mossholder, 1997) (see Table I). The purpose of this paper is to investigate the relationship between race and LMX in greater depth to explain the mixed empirical results. In particular, we explored racially diverse relationships between leaders and followers in both a complex organizational and controlled laboratory setting through the theoretical lens of LMX (Graen and Scandura, 1987; Graen and Uhl-Bien, 1995).

Racial diversity and LMX

LMX theory

LMX research suggests that high-quality relationships with one’s immediate supervisor are related to increased performance, satisfaction, commitment, and other work outcomes of employees (Bauer et al., 2006; Graen et al., 1982; Liden et al., 1993). LMX theory proposes that variation occurs in the quality of the relationship between a supervisor and each direct report, such that the supervisor may have a high-quality relationship with one subordinate and a poor relationship with another. High-quality exchange is characterized by increased subordinate job latitude and influence in decision making (Scandura et al., 1986), more open subordinate communication with the supervisor, and greater trust and loyalty among dyad members (Graen and Uhl-Bien, 1995).

A number of longitudinal and field experimental studies have supported the efficacy of this model of leadership, and its effects on numerous organizational outcomes have been comprehensively reviewed (see Dienesch and Liden, 1986; Dulebohn et al., 2012; Gerstner and Day, 1997; Graen and Uhl-Bien, 1995; Wilson et al., 2010). Longitudinal studies have provided evidence that LMX forms early in the relationship (Gerstner and Day, 1997). Liden et al. (1993), for example, were able to detect signs of LMX (i.e. perceptions from leader and member) as early as two weeks, but found that the influence of demographic similarity (a measure of gender, race, educational level, and age) was not significantly related to LMX at any time period in the study.

<table>
<thead>
<tr>
<th>Reference</th>
<th>Support for demographic similarity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goldberg et al. (2008)</td>
<td>Little support</td>
</tr>
<tr>
<td>Turban and Jones (1988)</td>
<td>Mixed</td>
</tr>
<tr>
<td>Wesolowski and Mossholder (1997)</td>
<td>No support</td>
</tr>
<tr>
<td>Bauer and Green (1996)</td>
<td>Support</td>
</tr>
<tr>
<td>Stark and Poppler (2009)</td>
<td></td>
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<tr>
<td>Matkin and Barbuto (2012)</td>
<td></td>
</tr>
<tr>
<td>Vecchio and Brazil (2007)</td>
<td></td>
</tr>
</tbody>
</table>

Table I. Example studies with mixed results for demographically similar dyads
Review of both the diversity and LMX literatures reveal a lack of attention to the implications of the relationship quality between leaders and members in diverse dyads (Scandura and Lankau, 1996). Early LMX research included gender, but few studies examined the effects of race or ethnicity (see Ospina and Foldy, 2009, for a review). A notable exception has been the relational demography work by Tsui and her colleagues (Tsui et al., 1995; Tsui and O’Reilly, 1989). Tsui and O’Reilly (1989) found differences in supervisor liking, subordinate role ambiguity, and role conflict between same-race and cross-race dyads. Hence, it is clear that a demographic factor such as race could play an important role in the development of high-quality LMX relationships when dyad members first come together (i.e. the stranger/role-finding stage; Graen and Scandura, 1987; Graen and Uhl-Bien, 1995).

Similarity-attraction theory and LMX

Similarity-attraction theory posits that as the similarity of individuals on a myriad of characteristics (including race) increases, liking, affect, trust and interpersonal attraction will likewise increase (Bauer and Green, 1996; Meglino et al., 1989; Roberson and Block, 2001). Because research supports the notion that perceived similarity and attraction generally influences LMX (Liden and Maslyn, 1998; Wayne et al., 1997), race similarity is assumed to have a similar relationship (Ibarra, 1995; Roberson and Block, 2001). However, results of studies using cross-race dyads have not fully supported this assertion.

For example, Matkin and Barbuto (2012) found no support for the relationship of demographic similarity with LMX considering race, gender, and sexual orientation. In their study, demographic similarity accounted for only one percent of the variability in LMX, although only nine percent of the dyads were racially dissimilar. Potential reasons for a lack of significance when considering demographic variables are their sample was not representative of a true study on racial diversity given only seven percent of the leaders were persons of color, and six percent of the followers were persons of color; and they used a unidimensional scale (LMX-7) to operationalize LMX, while others have argued that a multidimensional approach to LMX may provide insight into the differential LMX/outcome relationships (Dienesch and Liden, 1986; Liden and Maslyn, 1998). For example, how much loyalty one has toward their supervisor is conceptually distinct from how much respect they may hold for that person professionally or even how much they like that person.

Diversity is a complex construct (Harrison and Klein, 2007) and to better understand its impact on leader-member relationships, researchers are well served to explore its relationship with LMX through a conceptually multidimensional approach. In order to examine whether the inconclusive results on the relationship between diversity and LMX might be an artifact of unidimensional measurement of LMX, Liden and Maslyn’s (1998) multi-dimensional measure of LMX (LMX-MDM) was examined. Liden and Maslyn (1998) suggest that leader-member relationships are based on four fundamental dimensions (or “currencies of exchange”): professional respect, affect, loyalty, and contribution (see Table II).

Building off and extending the theoretical lens of LMX and attempting to reconcile mixed results from past research, therefore, we conducted two studies to determine the extent to which demographic similarity is associated with LMX. Extending the findings of Study 1 conducted in a field setting, Study 2 implemented a performance measure of the follower within a leader-follower dyad in order to examine the potential influence of “deep-level” diversity (Harrison et al., 1998) that is difficult to measure with consciously reported survey measures. Study 2 is the first known attempt to examine
the potential indirect influence of racial similarity/dissimilarity in terms of employee performance. Such research helps to inform management practice by demonstrating the impact racial biases can have in organizations, which in turn could lead to better interventions to limit the negative impact of racial biases in organizational settings. First, we begin with the reasoning and hypotheses of Study 1.

**Study 1: race across LMX dyads**

As stated above, similarity-attraction theory has been used to explain affect or liking, which may influence some of the four dimensions of LMX proposed by Liden and Maslyn (1998). Similarity is expected to be positively related to affect and liking; therefore, it is possible that racially similar leader-member dyads will be related to only the affect dimension of LMX (Byrne, 1971; Liden et al., 1993; Turban et al., 1990). Liden and Maslyn (1998) defined affect as the “[…] mutual affection members of the dyad have for each other […]” (p. 50). In other words, it is more similar to a friendship than a professional work relationship. In cross-race dyads, it may be expected that this level of mutual attraction is lower, based upon the attraction-selection-attrition model (Schneider, 1987) which suggests that people are attracted to people who are similar to them. While there may be relatively high levels of affect in cross-race dyads, it should be lower compared to same-race dyads, given that individuals may be more comfortable with members of their same race (Ibarra, 1995). While we do not necessarily expect race to have a negative influence on LMX, the multi-dimensionality of the construct implies the possibility of differentiated effects acknowledging the variable results of the relationship race has with LMX (Bauer and Green, 1996; Liden et al., 1993; Matkin and Barbuto, 2012; Riordan and Shore, 1997). Thus we predict the following:

**H1.** Affect will be higher in dyads where both leader and follower are either majority race members or minority race members than compared with cross-race dyads.
Moving beyond demographic similarity, the development of loyalty between leaders and members may interact with the impact of demographic differences. From the leader's perspective, Graen and Scandura (1987) assert that performance and competence play a critical role as outlined in their model of LMX development. It is possible, therefore, that demographic similarity is not as important a factor to racial minority members in terms of the loyalty construct of LMX—placing more value on the leader's loyalty, support and commitment to help the follower achieve personal goals (e.g. career advancement and job satisfaction) according to the power differential that may exist (Scandura and Lankau, 1996).

Specifically, the power differential associated with the leader and follower roles may at times be similar to that which exists between a majority and minority member of a society (e.g. Game, 2011). This asymmetry of power likely decreases the ability of the follower or minority member to upwardly influence the leader, especially when that leader is a member of a majority race. The leader's power, nevertheless; likely allows the leader to promote the development of the follower (i.e. career advancement and job satisfaction), which is best achieved when the follower perceives the leader is coming from a position of power (i.e. of a majority race; Game, 2011). Thus we predict:

**H2.** Loyalty will be higher in dyads where leader and follower are both of the majority race, and in cross-race dyads where the leader is a member of the majority race and the follower is a member of the minority race compared to dyads where both leader and follower are of minority race, and in cross-race dyads where the leader is of minority race and the follower is of majority race.

Building off of the logic used to describe the potential interaction between leader and follower loyalty and demographic differences in terms of the power differential that may exist in these situations (Game, 2011), the contributions a subordinate may offer to the relationship may also emerge based on an interaction between organizational role (i.e. leader vs follower) and racial group status (i.e. minority group vs majority group). The contributions of a minority group member may be greater when paired with a majority group member since desires for in-group membership translate into the willingness to handle extra-role behaviors beyond those in the formal job description (Liden and Maslyn, 1998, p. 50). In-group membership is characteristic of a high-quality exchange between leader and follower and leads to positive outcomes for the organization (i.e. low turnover and high commitment), as well as for the individual (i.e. positive performance rating and increased job satisfaction) (Liden and Maslyn, 1998). Therefore we predict the following:

**H3.** Contribution will be higher in dyads where leader and follower are both majority race members, and in cross-race dyads where the leader is of the majority race and the follower is of the minority race compared to dyads where both leader and follower are of minority race, and in cross-race dyads where the leader is of minority race and the follower is of majority race.

LMX in a context of diversity must address how race and ethnicity play a role in the emergence of relationship attributes. Respect and loyalty issues seem critical for the development of diverse leader-member dyads. The sensitivity of the leader to openly discuss issues related to race, for example, is critical to effective leader development as has been indicated for mentoring relationships (Thomas, 1993). Liden and Maslyn (1998) defined professional respect as the degree to which a person has excelled in his/her line of work. As noted by Scandura and Lankau (1996),
the development of respect within cross-race or cross-gender dyads will be more challenging due to preconceived ideas or stereotypes about the group to which the other person belongs. Thus we predict:

**H4.** Professional respect will be higher in dyads where both leader and follower are either majority race members or minority race members than compared with cross-race dyads.

**Method**

**Sample and procedures.** Survey questionnaires were administered during normal working hours to 669 employees of a large public library system in the southeast of the USA. Of the 669 employees surveyed, 510 subordinate surveys (76.2 percent) were returned. To have internally consistent data for all the analyses, subjects with missing data on any of the study variables were deleted, yielding a final sample size of 366 (for a 54.7 percent final overall response rate of the total questionnaires distributed). Response analyses were conducted to compare the means of each study variable following the reduction in the sample, and it was determined that consistent representation and lack of bias existed across the full and the final reduced sample of 366 respondents.

Average age was 45.5 years; 77.0 percent were female, and the majority were white (74.36 percent; 16.7 percent were African-American, 3.3 percent were Hispanic, 2.5 percent were Asian, 1.9 percent were Native American, and 1.4 percent characterized themselves as “other”). Respondents’ average tenure doing this kind of work was 8.9 and 4.9 years in their current job; they averaged 3.3 years working under their current supervisor. Job classification was as follows: 30.6 percent were clerical/secretarial, 24.6 percent were librarians (requiring graduate degree), 29.0 percent were library assistants/associates/specialists (similar to a librarian in the nature of the work, but not requiring a graduate degree), 11.7 percent were library pages (similar to a clerk or runner, shelving books and similar tasks), and 5.0 percent held miscellaneous other positions. The sample displayed fairly high education levels, where 26.2 percent had graduate degrees, 17.2 percent had either a bachelor’s degree or some graduate school, 35.5 percent had attended some college, and 21.0 percent had a high-school education.

Participants were informed about the study prior to survey administration by a letter from a senior executive, and university sponsorship of the research was stressed as well as the voluntary and confidential nature of the study. The current research is part of a larger research project, which necessitated the linking of subordinates to supervisors; thus, the survey could not be anonymous. Respondents were informed that only average or summary information across departments would be reported back to the organization for feedback (the data would not be used for evaluative purposes), and no information would be traceable to an individual employee.

**Materials.** The surveys given to subordinates requested the background or demographic information (age, gender, race, length of time at job, years with the current supervisor, education, and type of work) used in describing the sample above. The subordinate surveys also contained the measures described below.

**LMX.** The four-dimensional LMX conceptualization outlined by Liden and Maslyn (1998) was used to develop the hypotheses presented above and we used their measure in the current research. As described previously, the four dimensions are professional respect (three items), affect (three items), loyalty (three items), and contributions to the exchange (two items). Sample items include: “I respect my supervisor’s knowledge of
and competence on the job” (professional respect); “I like my supervisor very much as a friend” (affect); “My supervisor would come to my defense if I were “attacked” by others” (loyalty); and “I do work for my supervisor that goes beyond what is specified in my job description” (contribution). The response format employed was a five-point Likert scale (ranging from strongly agree to strongly disagree). Confirmatory factor analysis has supported the four-factor model, and the scales have reported acceptable psychometric properties and are free of acquiescence and social desirability response sets (Liden and Maslyn, 1998), although the contribution dimension has reported less-than-desirable reliabilities ranging from 0.56 to 0.60. The coefficient \( \alpha \) internal consistency reliabilities for the four scales in the current sample were similar to those obtained in previous research: professional respect = 0.93; affect = 0.90; loyalty = 0.82; and contribution = 0.58. While the affect, loyalty, and professional respect scales obtained acceptable reliability coefficients, the contribution measure had a reliability estimate below the rule-of-thumb generally considered acceptable in social science research (Nunnally and Bernstein, 1994), and results concerning this dimension should be interpreted with caution.

Results
Table III presents the means, standard deviations, reliability estimates, and correlations of the variables used in the analyses described below. \( H1 \) and \( H4 \) predicted that subordinates in diverse dyads (where leader and member were not the same race) will describe their relationship with their supervisor less positively than same-race dyads, and \( H2 \) and \( H3 \) predicted that subordinates will describe the contribution and loyalty dimensions of their relationship more positively when the leader represents the majority race. Respondents were categorized into one of four dyad types: both dyad members are of the racial majority (\( n = 230 \)); majority follower and minority supervisor (\( n = 42 \)); minority follower and majority supervisor (\( n = 73 \)); and both dyad members are minorities (\( n = 21 \)). To examine the unique relationship of the diversity of the leader-member dyad with LMX quality, we controlled for demographic variables that are potential confounds. Thus, the control variables of age, education level, tenure with supervisor, and job type were included in the initial analyses performed. First, a multivariate analysis-of-covariance (MANCOVA) was employed to estimate the effect of racial diversity on the four LMX dimensions as a set, with age, education, tenure with supervisor, and job type as covariates. The overall MANCOVA model (including the covariates) for the four LMX variables was significant (\( p < 0.05 \)). However, none of the control variables were significant, and thus covariates were not included in subsequent analyses.

<table>
<thead>
<tr>
<th>Variable</th>
<th>( M )</th>
<th>( SD )</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Professional respect</td>
<td>3.91</td>
<td>0.99</td>
<td></td>
<td>(0.93)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Affect</td>
<td>3.77</td>
<td>0.98</td>
<td>0.68**</td>
<td>(0.90)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Loyalty</td>
<td>3.54</td>
<td>0.86</td>
<td>0.65**</td>
<td>0.69**</td>
<td>(0.82)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Contribution</td>
<td>4.00</td>
<td>0.80</td>
<td>0.27**</td>
<td>0.21**</td>
<td>0.35**</td>
<td>(0.58)</td>
<td></td>
</tr>
<tr>
<td>5. Education (covariate)</td>
<td>4.26</td>
<td>1.97</td>
<td>0.01</td>
<td>−0.04</td>
<td>0.08</td>
<td>0.17**</td>
<td>−</td>
</tr>
</tbody>
</table>

Notes: Cronbach’s \( \alpha \) is shown along the diagonal in parentheses. *\( p < 0.05 \); **\( p < 0.01 \)
Next, an overall analysis-of-variance (ANOVA) was used for each LMX dimension (professional respect, affect, loyalty, and contribution) with the four dyad types used as independent variables. The overall ANOVA $F$ was significant for two dimensions (loyalty and contribution, $p < 0.05$; see Table IV). Scheffé post hoc tests were used to examine differences on the four LMX dimensions among the four dyad types described above. Table IV shows the mean scores on the four LMX dimensions under each of the four dyad categories. Three of the four hypotheses (i.e. all but $H3$) predict that categories 1 and 4 (dyads of both majority or both minority members) will have higher mean scores on three of the four LMX dimensions (affect, contribution, professional respect) than dyads where the members are racially diverse.

$H1$ predicted that affect will be higher in the non-racially diverse dyads. As shown in Table III, the ordering of the means on the affect dimension is for majority member/minority leader highest, both majority second highest, both minorities third, and minority member/majority leader just slightly less than both minorities. While the ANOVA $F$ is marginally significant, the four categories of dyad types are not significantly different from each other.

$H2$ predicted that loyalty will be higher in homogeneous and diverse dyads when the leader is of majority race, and this hypothesis is partially supported. The ordering of the four types is for both majority members highest, majority follower/minority leader next highest, followed by minority follower/majority leader and both minorities. post hoc tests reveal that category 1 (both majority members) was significantly different from minority follower/majority leader dyads and both minority member dyads. $H3$ predicted that contributions between dyad members will function similarly to loyalty, however, the ordering of the four types of dyads is not as predicted. Both minority categories had the highest mean scores, followed by both majority, majority follower/minority leader, and minority follower/majority leader. However, only the both majority dyad type had significantly different from the minority follower/majority leader type in Scheffé tests. This finding supports the similarity-attraction paradigm. $H4$ predicted that professional respect will vary among the four dyad types and be higher for homogeneous dyads; the ANOVA $F$ is not significant, and thus $H4$ is not supported (although majority follower/majority leader dyads had the highest scores among the four dyad types, they were not significantly higher than the others).

**Discussion**

The overall results from Study 1 partially support similarity-attraction theory as it is applied to LMX. The results from the first study indicate that when both members of

<table>
<thead>
<tr>
<th>LMX dimension</th>
<th>Both majority ($n = 230$)</th>
<th>Majority member/ minority leader ($n = 42$)</th>
<th>Minority member/ majority leader ($n = 73$)</th>
<th>Both minority ($n = 21$)</th>
<th>ANOVA $F$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional respect</td>
<td>4.01&lt;sub&gt;a1&lt;/sub&gt;</td>
<td>3.86</td>
<td>3.67&lt;sub&gt;a2&lt;/sub&gt;</td>
<td>3.71</td>
<td>2.56***</td>
</tr>
<tr>
<td>Affect</td>
<td>3.82&lt;sub&gt;a1&lt;/sub&gt;</td>
<td>3.98&lt;sub&gt;a1&lt;/sub&gt;</td>
<td>3.51&lt;sub&gt;a2&lt;/sub&gt;</td>
<td>3.67</td>
<td>2.62***</td>
</tr>
<tr>
<td>Loyalty</td>
<td>3.65&lt;sub&gt;a1,b1&lt;/sub&gt;</td>
<td>3.66&lt;sub&gt;a1,b1&lt;/sub&gt;</td>
<td>3.24&lt;sub&gt;b2&lt;/sub&gt;</td>
<td>3.15&lt;sub&gt;a2&lt;/sub&gt;</td>
<td>6.28**</td>
</tr>
<tr>
<td>Contribution</td>
<td>8.06&lt;sub&gt;a1&lt;/sub&gt;</td>
<td>8.00</td>
<td>7.45&lt;sub&gt;a2&lt;/sub&gt;</td>
<td>8.21</td>
<td>3.00*</td>
</tr>
</tbody>
</table>

**Notes:** Means with corresponding subscripts (e.g. a1-a2) are significantly different from each other ($p < 0.05$) according to the Scheffé post hoc test used. *$p < 0.05$; **$p < 0.01$; ***$p < 0.10$
the dyad are also majority members, majority followers in these dyads perceive their relationship with their supervisors more positively than those where the dyad is diverse racially or when both dyad members are minorities (with the exception of the loyalty dimension). As can be seen in Table IV, minorities reported significantly lower perceptions about their relationship with their supervisors on only one of the four LMX dimensions than did majority members (loyalty). There could be several explanations for this finding. Diener and Liden (1986) define LMX loyalty as the extent to which both leader and subordinate support each other’s character and behavior publicly. Minority subordinates, therefore, may not be more loyal to other minorities, strictly on the basis of their minority status. The subordinate may perceive the relationship more transactionally, and extra-role behaviors such as increased loyalty may not be seen as important in the relationship with their supervisor.

Nevertheless, category 3 dyads (minority follower/majority leader) reported higher mean scores for affect compared to both categories of homogenous dyads, which is counter to the predictions of similarity-attraction theory. For this aspect of the leadership relationship, it appears that the attraction-selection-attrition framework (Schneider, 1987) may provide one explanation. In racially homogeneous dyads, the goals and values of dyad members are more likely to be similar, and this may result in the willingness to take on tasks above that specified in the employment contract. Also, the social-historical circumstances of the minority group in the organization may affect the extent to which trust and respect develops within the leadership relationship, allowing mutual obligation between diverse dyad members to emerge (Mullings, 1994). Therefore, consistent with the literature to date, mixed results for the influence of race in LMX were found.

**Study 2: LMX, race, and performance**

Study 2 was designed to examine a possible alternative explanation to the findings above on the relationship of dyad diversity in LMX. In designing Study 2, a conscious effort was made to search for new and innovative ways to examine the influence of race in LMX relationships. Since most previous research designs looking at race in LMX relationships used survey-based field studies (including Study 1), we decided a new design approach was warranted given the mixed results to date. Laboratory experiments provide, “an optimal environment within which to engage in research for purposes of discovery/innovation” (Brown and Lord, 1999, p. 534) and “an ideal opportunity to assess the unique contributions of constructs that may be so highly interrelated in natural settings that it is impossible to disentangle their unique effects in the field with survey data” (p. 535). Therefore, a laboratory design was used in Study 2.

The hypotheses in the first study were built on similarity-attraction theory which asserts that similarity between individual characteristics increases interpersonal attraction, trust, and affect. However, our results suggest that similarity-attraction theory does not completely explain the relationship between dyad diversity and LMX, even once we consider the multidimensional conceptualization of LMX. Socially situated cognition (SSC), a relatively new approach in social cognition that has recently been applied to the organizational domain (e.g. Mitchell et al., 2011), may add additional insight on the relationship between dyad diversity and LMX in so much as the approach focusses both on the cognitive processing of social information as well as currently active motivations in specific situations. Therefore, in situation specific interactions, such as those found in leader-follower relationships, the SSC approach may provide a better understanding of the relationship between dyad diversity and LMX, than the similarity-attraction theory in isolation.
The SSC approach suggests that all cognitive processes (assumed to include social perceptions and biases related to stereotypes, leadership, and followership) are executed for motivational reasons and are adaptive to the situation (Smith and Semin, 2004). Cognitive processes are not only influenced by known information like those stored in stereotypes, but are also impacted by an individual’s motives and characteristics as well as the current situation (Smith and Semin, 2007). This approach suggests that the motives and characteristics of the leader and follower may have an impact on LMX beyond dyad diversity. In the second study, we examine the impact that follower motives have on their perception of LMX and whether this motive outweighs the impact of dyad diversity on LMX.

Based on the premise of SSC, the attitudes that followers have toward the leader are based on their motives instead of differences in race per se. Even at a basic cognitive level, individual desires and preferences, for example, have been found to nonconsciously influence interpretation of visual information toward the desired preference (Balcetis and Dunning, 2006). Such findings make sense when considering the numerous and complex stimuli that are present in any one situation at the same time (Gollwitzer and Moskowitz, 1996). Perception and the activation of mental representations must directly interact with individual representations (e.g. current goals and motives) and contextual cues from the environment (e.g. Kunda and Spencer, 2003). In other words, what someone wants (even when unconscious) influences what is mentally accessible, which in turn can cause perceptions of relevant stimuli to shift based on that accessible knowledge (Fishbach and Ferguson, 2007). Therefore, when the follower has the motivation to have a favorable relationship with the leader through affiliation, similarity-attraction theory would not directly apply and the race of the leader would not influence the follower’s perceptions of the leader or of the relationship with the leader. However, when the follower does not have motivation to affiliate with the leader, similarity-attraction theory may explain the relationship between diverse dyads and LMX. Thus, we revise the hypotheses from the first study as follows:

**H1.** Follower affiliation motivation will moderate the relationship between dyad diversity and LMX affect such that affect will be higher in dyads where there is a match vs mismatch between a leader’s and member’s race when follower motive is low vs high.

**H2.** Follower affiliation motivation will moderate the relationship between dyad diversity and LMX contribution such that contribution will be higher in dyads where there is a match vs mismatch between a leader’s and member’s race when follower motive is low vs high.

**H3.** Follower affiliation motivation will moderate the relationship between dyad diversity and LMX loyalty such that loyalty will be higher in dyads where there is a match vs mismatch between a leader’s and member’s race when follower motive is low vs high.

**H4.** Follower affiliation motivation will moderate the relationship between dyad diversity and LMX professional respect such that professional respect will be higher in dyads where there is a match vs mismatch between a leader’s and member’s race when follower motive is low vs high.

As a further test of the influence of race in a leader-follower context, we also examined an actual behavioral measure of performance. Unlike the survey measures typically used in LMX research, an effort was made to examine an actual behavioral
measure which is consistent with a SSC approach since past research has shown that behavioral measures can differ from survey measures particularly within sensitive areas such as racial attitudes (Kunda and Spencer, 2003). Therefore, in regards to an actual behavioral measure, it was predicted that in cases when there was a match between the leader’s and the follower’s race, followers would work harder in comparison to when there was a mismatch. Evidence to support this prediction is based on research showing that people prefer similar others over non-similar others simply because similar others cognitively activate positive associations about themselves (Jones et al., 2004), being mimicked by someone significantly increases positive behavior toward the mimicker (Van Baaren et al., 2004), and sharing the same personal information with others (e.g. birthday, first name) increases the likelihood that people will comply with requests from that person (Burger et al., 2004). Thus we predict the following:

H5. Followers will put forth more (vs less) effort in terms of time spent on the task in dyads where there is a match vs mismatch between a leader’s and follower’s race.

Methods

Participants and design. In total, 68 senior undergraduate business students volunteered to participate in a series of four one-hour sessions in order to receive extra credit in their capstone strategic management courses at a large southwestern university in the USA. Four participants’ data were not properly recorded because of a computer problem and ten participants failed to complete all four sessions, leaving a total of 54 participants. During the first session, the experimenter made a written note concerning the perceived race of the participant leading to 63 percent being recorded as Caucasian (white), 24.1 percent being recorded as Hispanic, 7.4 percent being recorded as Asian, and 5.6 percent being recorded as African-American (black). The gender of the participants was not recorded. Upon entering the laboratory, participants were told that a travel company was sponsoring the project in order to test the use of an on-line chat feature and to recruit future employees. Participants were randomly assigned to be working with either a black female boss or a white female boss over the on-line chat feature in a one-way between-participant design. For the final analyses, 25 participants remained in the black boss condition and 29 remained in the white boss condition.

Procedure. As suggested above, participants were led to believe this study was investigating technology in the workplace and as such they would be completing a series of computer-mediated work tasks for a travel agency, Student Travel Inc., to help the company determine whether they wanted to implement the use of chat programs to increase their productivity and efficiency. They were also led to believe that the company was using the study to find potential employees. Given that many of the participants were currently seeking employment, this cover story was used to increase the quality level of responses.

Participants were told they would be computer chatting with one of the two managers at Student Travel Inc. and were randomly assigned to review a resume that manipulated the boss’ apparent race (black vs white). Both resumes were exactly the same except for the boss’ name and photo. In the white condition, a picture of a Caucasian woman named “Denise O’Hara” was depicted. In the black condition, a picture of an African-American woman named “LaToya Johnson” was depicted (see Appendix 1). The name-photo combinations were pretested with a separate sample of
participants \((n = 20)\). The two (black, white) name photo combinations (out of 20) that were seen to “most bring to mind” a Caucasian women and an African-American women on a seven-point scale were selected for this study. The participants believed they would be interacting with this boss over four one-hour lab sessions, typically spaced-out over two weeks, via Google Chat (see Appendix 2). The boss’ name and picture were displayed each time an instant message appeared. In reality, the experimenter led the chat sessions via scripted prompts and questions that were copied and pasted into the chat window to ensure each interaction was the same. Each time the participant visited the lab they were assigned a cubicle with a computer. Over the course of completing the four sessions, participants also completed a series of questionnaires using the computer program MediaLab (see materials section below).

**Materials – main variables**

*LMX.* The four-dimensional LMX measure (Liden and Maslyn, 1998) was used again in Study 2 (affect \(\alpha = 0.89\); loyalty \(\alpha = 0.91\); contribution \(\alpha = 0.70\); professional respect \(\alpha = 0.82\)). The survey was administered at the end of the fourth session.

*Race (mismatch).* To determine the race match vs mismatch variable between the participant and supervisor, participants’ experimenter-identified race was compared to the race of the assigned boss, which created 21 participants with a match and 33 with a mismatch. For the matched race pairs, 19 of the pairs were white-white pairs and two of the pairs were black-black pairs. For the mismatched race pairs, 16 of the pairs were black-white pairs, seven were black-Hispanic pairs, six were Hispanic-white pairs, three were Asian-white pairs, and one was black-Asian paired.

*Affiliation motivation.* At the end of sessions 2-4, participants were asked the following three questions that were created by the experimenters on a five-point response format from “not at all” to “very much”: “to what extent were you trying to get along with your assigned boss?,” “To what extent were you attempting to have a smooth interaction with your assigned boss?,” and “To what extent were you trying to get your assigned boss to like you?” A one-way within-group ANOVA found no significant differences between the three times these questions were asked, \(F < 1\), and thus the three item responses were summed together to create one score (\(\alpha = 0.93\)).

*Behavioral performance measure.* For each chat session, a timestamp was recorded whenever participants sent an instant message to their supposed supervisor in the chat session. These timestamps were used in sessions 2-4 in order to determine the total time it took the participant to complete the assigned tasks. The time from when the supervisor’s full request was sent to the time the participant’s last message was sent (that had to do specifically with their task) was used. As with affiliation motivation, a one-way within-group ANOVA found no significant differences between the three session times, \(F < 1\), and thus the three times were summed together to create one score. Although an assumption was made that the longer participants took to complete the task, the more effort they put into the task, the opposite assumption could have been made as well: the longer participants took to complete the task, the less efficient they were at completing the task and the less effort they put into the task. Therefore, the assumption was examined after the study by the researchers and the results showed that participants did indeed provide more quality information for longer vs shorter time periods. In the context of the study, quality responses came in the form of providing detailed responses that also included the links to the needed websites to support the details provided.
Control variables
Conscientiousness, internet search experience, and GPA. Used specifically as controls for the ‘time to complete tasks’ variable discussed above, a six item scale using a ten-point response format from “not at all” to “very much,” measuring conscientiousness was adapted from the Big-Five (Costa and McCrae, 1995; \(M = 41.74, SD = 8.27, \alpha = 0.66\)) and used during the first interview session. Two additional items created by the experimenters asked about the level of experience in doing internet searches (1 = very low level, 10 = very high level) and another asked how proficient the respondent was at doing internet searches (1 = not at all proficient, 10 = very proficient). Both items were summed to create one score (\(M = 15.65, SD = 3.22, \alpha = 0.89\)). A final item asked for a self-report of current grade point average (GPA, \(M = 3.19, SD = 0.32\)).

Ancillary variables
The following variables were used to ensure normalcy in the sample according to LMX relationships (Dulebohn et al., 2012). As with the relevant main variables above, one-way within-group ANOVAs found no significant differences between the three times these variables were measured at the end of sessions 2-4, and thus each variable was summed together (see Table V for means and standard deviations).

Supervisor trait rating. At the end of all sessions 2-4, participants were requested to rate their assigned boss using a seven-point response format (−3 = poor to +3 = excellent) on a series of eleven traits or characteristics (e.g. competence, intelligence, warmth, interest) adapted from Ambady and Krabbenhof (2006). Participants’ ratings were summed together within and across sessions to create one score (\(\alpha = 0.94\)).

Self-performance[2]. As with the trait ratings, at the end of sessions 2-4, participants were requested to rate their own performance using a nine-point response format on the following items: “overall, how well did you perform during the sessions you just completed?” (1 = very poorly to 9 + very well) and, “Based on your performance in the sessions you just completed, how qualified do you think you are for a job at Student Travel, Inc.” (1 = not at all qualified to 9 = very qualified). Participants’ rating were summed together within and across sessions to create one score (\(\alpha = 0.91\)).

Supervisor perception of performance. At the end sessions 2-4, participants were asked to complete a single item: “if you had to make a guess, how well do you think your assigned boss think you did in the sessions you just completed?” A nine-point response format was used from “not at all well” to “very well” Responses were summed together across sessions to create one score.

Results
As Table V shows, correlations between the LMX scales and total trait ratings of the supervisor, perceived perception of the boss, perceived self-performance, and affiliation motivation across the three task sessions have a strong positive relationship such that LMX is positively related to traits of the supervisor, the way they think their boss sees their performance, the way they perceive their own performance, and the positive affiliation with their boss. These results are consistent with existent research and theory in LMX (Dulebohn et al., 2012). Counter to H1 through H4, however, the correlations between the four LMX dimensions and match/mismatch in follower and supervisor race were not significant. In addition, affiliation motivation was not related to race match vs mismatch, which we further verified through insignificant results of
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<th>Variable</th>
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<tr>
<td>1. Assigned race-boss</td>
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<td>2. Race match-mismatch</td>
<td>−0.60**</td>
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<td>3. Boss traits (3 tasks)</td>
<td>−0.13</td>
<td>0.17</td>
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<td>4. Boss-perform (3 tasks)</td>
<td>−0.03</td>
<td>−0.01</td>
<td>0.37**</td>
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<td>5. Self-perform (3 tasks)</td>
<td>−0.07</td>
<td>0.02</td>
<td>0.45**</td>
<td>0.78**</td>
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<td>6. Affiliation (3 tasks)</td>
<td>0.05</td>
<td>−0.04</td>
<td>0.55**</td>
<td>0.23</td>
<td>0.47**</td>
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<td>7. Time (3 tasks)</td>
<td>0.28*</td>
<td>−0.30*</td>
<td>−0.22</td>
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<td>−0.02</td>
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<td>8. LMX affect</td>
<td>−0.18</td>
<td>0.17</td>
<td>0.71**</td>
<td>0.41**</td>
<td>0.35**</td>
<td>0.55**</td>
<td>0.08</td>
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<td>9. LMX loyalty</td>
<td>−0.14</td>
<td>0.24</td>
<td>0.66**</td>
<td>0.43**</td>
<td>0.61**</td>
<td>0.51**</td>
<td>−0.01</td>
<td>0.69**</td>
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<td>10. LMX contribution</td>
<td>0.02</td>
<td>0.07</td>
<td>0.50**</td>
<td>0.53**</td>
<td>0.56**</td>
<td>0.53**</td>
<td>0.11</td>
<td>0.66**</td>
<td>0.73**</td>
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<td>11. LMX P-respect</td>
<td>−0.22</td>
<td>0.25</td>
<td>0.70**</td>
<td>0.47**</td>
<td>0.46**</td>
<td>0.50**</td>
<td>−0.04</td>
<td>0.79**</td>
<td>0.64**</td>
<td>0.49**</td>
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<td>763</td>
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<td>Notes: *p &lt; 0.05; **p &lt; 0.01</td>
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hierarchical regression analyses to predict LMX with an interaction between race match vs mismatch and affiliation motivation measures.

Evidence to support, however, can be seen in Table V. Beyond the significant correlation between condition assignment and total time to complete tasks, a significant relationship was found between race match vs mismatch and total time to complete tasks. To further examine H5, we conducted a two-step linear regression on the total time to complete the tasks using the black vs white boss manipulation as the predictor. In the first step, the control variables of total conscientiousness, internet search experience, and GPA were included. In the second step, the black vs white boss manipulation was included. Results showed that the optimal linear combination of control variables in step one accounted for 3.3 percent of the total variance in total time to complete tasks scores ($F < 1$). Adding the black vs white boss manipulation in step two created a significant improvement in the amount of variance explained, accounting for an additional 9.5 percent of the total variance in total time to complete tasks ($R^2 = 0.13, F (1,49) = 5.31, p = 0.03$), with the black vs white boss manipulation showing significance ($B = 20.58, p = 0.03$). This indicates that participants’ time to complete the tasks across the three sessions was significantly longer when randomly assigned to the white boss ($M = 79.41$ min, SD = 32.06) as compared with the black boss ($M = 61.36$ min, SD = 32.21).

To specifically examine the race match vs mismatch component of H5, a two-step linear regression was conducted on the total time to complete the tasks using the race match vs mismatch measure as the predictor. In the first step, the control variables of total conscientiousness, internet search experience, and GPA were included. In the second step, the race match vs mismatch measure was included. Results showed that the optimal linear combination of control variables in step one accounted for 3.3 percent of the total variance in total time to complete tasks ($F < 1$). Adding the race match vs mismatch measure in step two resulted in a significant improvement in the amount of variance explained, accounting for an additional 10.2 percent of the total variance in total time to complete tasks ($R^2 = 0.14, F (1,49) = 5.77, p = 0.02$), with race match vs mismatch being significant ($B = -21.82, p = 0.02$). Specifically, participants’ time to complete the tasks across the three sessions was significantly longer when there was a race match ($M = 83.52$ min, SD = 30.29) than a race mismatch ($M = 63.12$ min, SD = 32.77) between the leader and the follower.

Discussion

This study provides additional insight into how race is related to leader-follower relational dynamics. By designing the study from the follower’s perspective, starting at the onset of the beginning phase of the simulated employment contract, and holding constant all factors involved with supervisor and follower constant, we were able to directly assess the weight a follower places on a leader’s demographic similarity or dissimilarity. Consistent with the findings obtained by Liden et al. (1993) we expected LMX to emerge early in our simulation, which was supported by respondents’ survey responses.

Nevertheless, counter to H1 through H4, racial similarity and dissimilarity did not interact with affiliation motivations in determining LMX. However, dyad racial similarity/dissimilarity was related (as was the supervisor race manipulation for all participants), to a behavioral measure of performance in support of H5. Although finding support for only H5 was not expected, in retrospect such a finding is not inconsistent with a general SSC approach. In particular, in the area of stereotype
studies, early research suggested that stereotypes came to people’s minds even when they consciously did not believe such stereotypes (Devine, 1989). Later work suggested a distinction between stereotype activation and category activation, such that all people show automatic stereotype activation, while only higher prejudiced people form a negative impression after category activation (Lepore and Brown, 1997). Further, research has shown automatic activation of racial attitudes upon the mere presentation of black and white faces (e.g. Cunningham et al., 2001), and nonconscious use of Afrocentric features by participants in making stereotypic inferences (Blair et al., 2004).

Research suggests that one implication of how stereotypes are cognitively processed is that racial attitudes and behaviors can differ greatly depending on whether the measure is implicit (nonconscious) or not (Fazio et al., 1995). Insofar as the survey measures (i.e. affiliation motivation, LMX) represent more conscious measures and the performance variable represents a more nonconscious measure, it may be expected to find differences having to do with race only in the nonconscious measure as we found in the current study. We found that all participants in the black boss manipulation showed less effort than those in the white boss manipulation. In addition, since research has demonstrated that people prefer similar others over non-similar others simply because similar others nonconsciously activate positive associations about themselves (Jones et al., 2004), it may be expected that differences having to do with race would only be found in the more nonconscious measure as we found in our study. Participants whose race mismatched that of their boss exerted less effort than those whose race matched that of their supervisor.

General discussion
Taken as a set, the two studies presented in this paper investigate the relationship among dyad racial diversity, LMX quality, and employee performance. The first study, which applied similarity-attraction theory to a multi-dimensional construct of LMX produced mixed results. Based on the literature that suggests that homogeneous relationships have fewer challenges, it was expected that homogeneous relationships would report better quality LMX relationships for certain dimensions (affect and professional respect), and an ordering of LMX quality based on racial status (loyalty and contribution). We found that demographic similarity is not necessarily directly associated with LMX quality, with the exception of the contribution dimension. Demographic similarity does not appear to be associated with differences in professional respect, and only shows partial support for affect among the four types of dyads.

The mixed results of the first study and prior studies caused us to question whether “surface-level” or “deep-level” diversity (Harrison et al., 1998; Ragins and Gonzalez, 2003) is more likely to influence LMX quality and employee performance. Such questions prompted us to run a second study were we could include a behavioral measure of performance to get more at deep-level diversity. In the second study, follower affiliation motive was also introduced as a moderator that may explain the mixed results from the first study.

The results of the second study found that affiliation motivations do not interact with racial similarity and dissimilarity in LMX quality, possibly indicating that race may not be a factor in LMX quality. However, our results indicate that leader race and racial similarity/dissimilarity was related to follower’s behavioral measure of performance. Research on the relationship between LMX and employee performance suggests that high-quality relationships between an immediate supervisor and his or
her followers is related to increased employee performance (Graen and Uhl-Bien, 1995). Thus, our finding that race and racial similarity/dissimilarity does not directly impact LMX quality but is related to employee performance suggests that there is still a need to study workplace diversity, LMX quality, and employee performance.

One limitation of this research is the limited diversity of the participants. In both studies, the majority of the participants were white (74.36 percent of Study 1 participants and 63 percent of Study 2 participants) and there were fewer same-race minority dyads (7.1 percent of Study 1 and 3.7 percent of Study 2 dyads). However, the context of the first study is an actual work setting and the racial diversity of participants of the study is indicative of the work context. To assess the generalizability of the research findings, future research using a similar framework should look at the effects of other individual demographic variables with LMX, such as additional racial/ethnic dyad compositions (e.g. Asian/non-Asian dyad), as well as the impact of age, obesity, disability, or sexual orientation. Additional research could also focus on white males who have been victims of reverse discrimination and whether that could have an effect on LMX in homogenous or diverse leader member dyads. In considering the cultural limitation of our study situated in the USA, future research should also consider different cultural settings and the demographic variables that would likely affect LMX.

Scandura and Lankau (1996) proposed that contextual variables may interact with diversity to impact LMX. We did not include context as a variable measuring the organization’s acceptance of cultural diversity as Scandura and Lankau (1996) suggest. Therefore, future studies should incorporate the diversity climate as well as a study of implicit biases to further explore the effects of diversity and LMX (Cortina, 2008; Graen and Uhl-Bien, 1995; Rosette et al., 2008). Such research will necessitate the collection of data from multiple organizations, but will be a major contribution to understanding the role of context effects on LMX development in diverse dyads.

Another important extension of this research would be to analyze the intersection of gender, race, and socio-economic status, as well as a comparison of the unique effects on LMX. As a follow up to the current study, a qualitative, exploratory field study examining the full-cycle of LMX with a longitudinal design, triangulated with a field study (survey design) to assess implicit bias and other perceptual cognitions from the leader and member perspective, would enable researchers to explore first-hand a new logic regarding diversity and LMX.

Despite these limitations, this paper provides some new directions to consider in the study of workplace diversity, LMX quality, and employee performance. First, this study suggests that racial stereotypes may influence LMX. The results of Study 2 demonstrated that the leader’s race influenced the participants’ performance even when their survey responses suggested that the leader’s race was not a factor. Although people use stereotypes, the activation and use of racial stereotypes may not be intentional or conscious (Bargh et al., 1996). Future research could investigate the impact of nonconscious activation of stereotypes on work relationships and performance. Further, the activation and use of racial stereotypes may be based on individual comprehension, self-enhancement, and prejudice avoidance goals (Kunda and Spencer, 2003). Motivation to avoid prejudice can influence the way people respond in work settings as well as the way people answer surveys. People who are motivated to avoid prejudice, either due to social pressures or personal motivation, are less likely to apply activated stereotypes (e.g. Devine, 1989). Continued research in this area will inform management practice by more fully demonstrating how and in what ways racial
biases can influence leaders and employees in work settings. Such research will in
turn allow for effective interventions to be developed; for example, programs that help
bring to conscious awareness personal racial biases and steps to limit those biases
in work contexts.

Second, the results of this research suggest that implicit measures may reveal
activated stereotypes and biases that are not captured by surveys. In this research,
racial similarity preference was not detected in the LMX survey measure, only in the
indirect measure of observed behavior when the participants were not aware that race
was part of the study. Utilizing indirect measures may provide additional insights to
management research in the area of racial diversity.

Conclusion
In this paper, we addressed the inquiry raised in the context of understanding diversity
and leadership by expanding the boundaries of LMX theory, thus contributing overall
to the relational demography literature. Given the recognized importance regarding
diversity in organizations and current workforce trends of increased diversity
(Cox, 1994; Richard and Miller, 2013), it is increasingly important for researchers to
examine the possible impact of diversity variables on the development of
leader-follower relationships, as was done in our current study.

The potential impact of current workforce trends upon theory and research in
leadership can no longer be ignored (see Richard and Miller, 2013). Individuals bring their
knowledge, skills and abilities to working relationships including demographic input,
self-knowledge, interpersonal skills, and their level of education about other race racial
and ethnic groups. The interplay of organization, individual, and relationship processes
results in either advancement barriers for minorities or an alternative path to job
satisfaction and career advancement. Much more research is needed on the manner in
which this alternate path can be achieved. It is hoped that this paper stimulates more
discussion and research on the development of diverse leaders within LMX relationships.

Notes
1. The means and standard deviations of the main variables can be found in Table V.
2. Although not significant, participants did become more confident in their performance over
time, $F (2,106) = 2.5, p = 0.087$.

References
trait construct and stereotype activation on action”, Journal of Personality and Social
Psychology, Vol. 71 No. 2, pp. 230-244.
moderating role of extraversion: leader-member exchange, performance, and turnover during


Further reading


(The Appendix follows overleaf.)
Appendix 1

Resume Example

LaToya J. Johnson
2104 W. 14th St, Fort Lauderdale, FL 33301
LaToya.Jewell@gmail.com

Student Travel, Inc.

Fort Lauderdale, FL
10/2007-Present

Senior Manager
• Implemented travel scheduling system reducing labor costs by $7,500/year
• Launched marketing campaign generating over $25,000 in new business
• Managed a team of five travel consultants

Manager
• Negotiated a contract valued at over $10,000/year with Delta Airlines
• Managed contracting relationships with over 25 affiliates
• Managed a team of four travel consultants

STA Travel

Tucson, AZ
5/2001-6/2003

Associate (Full-time)
• Assisted customers with travel planning and booking
• Conducted market research to determine popular destinations
• Coordinated the annual STA Travel Alternative Spring Break trips (2001-2003)

Associate (Part-time)

University of Arizona

Tucson, AZ

Bachelor of Science in Business Administration
• Major: Marketing (with Honors)
• GPA: 3.52 (Cum Laude)
• In-Major GPA: 3.80
• Honors Thesis: “The Influence of Alternative Spring Break Location on Student Traveler Satisfaction”

Awards
Manager of the Year
Student Travel, Inc. (2009)
Above and Beyond award
Top Salesperson Award
STA Travel (Spring 2003, Summer 2001)
Eller 100 (top 100 graduating seniors)
University of Arizona – Eller College of Business (2001)

Skills and Certifications
• Certified Travel Counselor – The Travel Institute (2006-Present)
• Certificate in International Business – The University of Arizona (2001)
• Proficient with Microsoft Word, Excel, Access, and Powerpoint,
• Advanced expertise in Salesforce.com
• Basic expertise in QuickBooks Pro
• Conversational in German and French
• Basic knowledge of Spanish (in training)

Appendix 2. Session details

First session: interview
When initially arriving to the lab, participants received a general overview of the experiment and completed a get-to-know-you task followed by a brief interview. Participants were given a written description of the travel agency (Student Travel, Inc.), information about their boss in the form of a resume, photo, and a fill-in-the-blank questionnaire which asked them about demographic information relevant to the job position, such as extracurricular activities, travel experience, foreign languages spoken, and year in school. Participants were asked to fill in all the blanks and
were informed that they would be prompted to share this demographic information with their boss as a “get to know you” activity. Participants were given approximately ten minutes to review this information, fill out the demographic sheet, and were asked to notify the experimenter when they had finished. Once the Google Chat started, participants were prompted by their “boss” to share their demographic information. The first session ended with her asking participants a variety of interview-style questions.

Second session: flight search
Participants were asked by their boss through a series of prompts to search for flights from Philadelphia, PA to Sorrento, Italy over spring break in the following year. The participants were informed that the budget was tight for the client so price was of more importance to her than number of stops or even mode of transportation (for instance, if it was cheaper to fly to Venice and then take the train to Sorrento). The participants were also instructed to look for different dates around the desired time to see if travel costs were less expensive, and then finally to send the identified and priced options back to the supervisor.

Third session: city information
Participants were asked by their boss through a series of prompts to search for information on Dubai (in the United Arab Emirates) on behalf of a father looking to send his son on his company’s winter break trip. The participants were told that the father’s son was 21, somewhat of an outdoorsman, and was really big into historical sites and architecture (he was architecture major at his university). They were also told the trip was going to be ten days, nine nights and that the father had a budget of US $2,000 for the trip (beyond the airfare to and from Dubai and hotel accommodations that are part of the package). Finally, they were instructed to send the list of attractions the son might be interested in back to the supervisor.

Fourth session: study abroad bid
Participants were asked by their boss through a series of prompts to create a list of sites to visit in Panama; and a suggested per-person budget for 20 people flying from Kansas City Airport (15 students, 5 adults) that included flight, hotel (4 students/room), and various activities for two weeks that would allow Student Travel Inc. to bid on a coordination project for a Summer Study Spanish course to Panama. They were also instructed to look up activities that might be both fun and educational since it was a school-sponsored trip. Finally, they were told to send the list of activities and a per-person budget to their supervisor.